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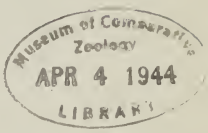

THE KITES OF THE GENUS ICTINIA

BY GEORGE MIKSCH SUTTON

ARE the Mississippi Kite and Plumbeous Kite distinct species, or are they geographical races of the same bird? Twenty years ago, when I first compared specimens of the two forms, I was so impressed with certain differences between them that it did not occur to me to question the judgment of those who had accorded them full specific rank. At that time I had not seen either in life, had not examined either eggs or young birds, and did not know enough about taxonomy to be concerned with the validity of such phylogenetic concepts as might be embodied in, or proclaimed by, their scientific names.

Today I am much better acquainted with these two kites. I have spent weeks on end with the former in western Oklahoma (Sutton, 1939:41–53) and have encountered the latter briefly in southwestern Tamaulipas, at the northern edge of its range (Sutton and Pettingill, 1942:8). I have handled the skins in several of our museums and am convinced that neither form has a single morphological character wholly its own. I have made a point of observing both birds critically in life, have heard their cries, noted carefully the colors of their fleshy parts, painted them from freshly killed specimens, skinned them, and examined their stomach contents. All this, together with what I have learned from the literature concerning the distribution and nesting habits of the Plumbeous Kite, convinces me that the two birds are conspecific. In the following paper I propose to show why I consider them thus closely related.

In disposition and behavior they are alike. They are mild to the point of docility much of the time though capable of becoming pugnacious when their nests or young are threatened. They may perch for an hour at a stretch in the very top of a tree but are more likely, especially on a hot day, to seek a shady spot on a lower branch. Their flight is buoyant, easy, and graceful. As they soar about, their widespread tails veer this way and that.

I have not had opportunity to compare their cries directly, but the shrill whistles of Plumbeous Kites that I heard in Tamaulipas seemed to me the precise counterpart of the *phee-phew* I had so often heard from the Mississippi Kites in Oklahoma.

Both birds feed chiefly on large insects, many of which they capture on the wing. Freshly killed specimens have the same peculiar, sweetish, slightly offensive odor, probably that of insects they have eaten. Too, they usually have a soiled patch in the middle of the under tail coverts—evidence of the habit of tucking moist, partly eaten prey snugly up against the tail as they fly.

As for their nidification, I can say nothing concerning the Plumbeous Kite from personal observation. The nest is described as "a collection of rather coarse twigs" built with "but little care" and placed thirty to forty feet up in a mangrove (Dickey and van Rossem, 1938: 108); as a "small, rather formless" structure "of sticks placed in the main crotch of a tree about twenty feet from the ground" (Chapman, 1894:70); and as "composed of small sticks . . . lined with leaves and fibrous material, and placed toward the end of a branch of a *Ceiba* at 50 to 60 feet" (Belcher and Smooker, 1934:589). It must, therefore, be very much like that of its northward ranging relative. The Mississippi Kite nests "in tall trees" (Chapman, 1932:216) when it inhabits a heavily forested region. So, apparently, does the Plumbeous Kite. Chubb (1916:274–275) quotes Schomburgk to the effect that the latter form "builds its nest of twigs in tall trees that are quite impossible to climb."

The eggs of the two forms seem to be very similar. They are white or very pale bluish white, unmarked save for nest stains. Three Plumbeous Kite eggs described by Belcher and Smooker (1934:589) measured 40 x 33, 41.25 x 35.5, and 41 x 35 mm., while the average for 29 Mississippi Kite eggs measured by Bendire (1892:179) was 41 x 34 mm. (extremes: 39 x 32—44.5 x 36.5). However, the egg of the Plumbeous Kite figured by Oates (1902: plate 14) is much more spherical than the egg of the Mississippi Kite figured by Bendire (1892: plate 5); the former is "oval," the latter, "short ovate" (Ridgway, 1886: plate 16). The Mississippi Kite lays one to three eggs, usually two. So few Plumbeous Kite nests have been discovered that it is hard to say what the average set may number. A nest reported from El Salvador held a complete set of one egg (Dickey and van Rossem, 1939:108). One nest found in Trinidad held one egg, another held two (Belcher and Smooker, 1934:589). A nest in "South Guyana" (= mainland of Brazil near the island of Maracá) held one young bird (Goeldi, 1897:150). Wolfe (1938:6) records a single egg from Brazil, and a set of two from Paraguay.

As for the natal down, I have not yet seen a specimen nor found a description of the newly hatched Plumbeous Kite, but a young one "about a week old" is said to have been "of white color" (Goeldi, 1897: 150). The newly hatched Mississippi Kite is snow white with a dull gray facial mask and a very faint wash of brown on the nape, back, and upper side of the wings (Sutton, 1939:48).

I have not had opportunity to compare skeletons of the two birds, but both have short, scutellate tarsi and rather short toes; well proportioned, pointed wings with the two outermost primaries notched; round nostrils; broad, roundish head; and compact body.

If, then, these two kites are so much alike, how do they differ? The Plumbeous Kite is darker than the Mississippi Kite, generally speaking. Its principal diagnostic marks are the white barring of the tail and the reddish brown patch on the primaries. These are usually thought to be specific characters. But are they? Let us consider all the so-called 'species characters' one by one.

1. *White barring of tail.* In adult plumage the tail of the Plumbeous Kite is always barred with white. At first glance this appears to be a strong species character, but careful examination of any large series of Mississippi Kites reveals the presence of white tail-barring (see Amer. Mus. Nat. Hist. Nos. 80643 and 470055) and gray tail-barring (see Univ. Mich. Mus. Zool. No. 57265 and G. M. Sutton No. 2315) in some breeding, and probably fully adult birds, as well as in a good many subadult birds. It is normal in birds under a year old; it is fairly common in the first breeding plumage (perhaps because of delayed molt); and its presence is evidence of morphological overlap.

2. *Red-brown wing-patch.* Most (probably all) adult Plumbeous Kites have a more or less extensive rufous patch on the primaries. Some young Plumbeous Kites also have it. But some young Plumbeous Kites do not have it, and most adult Mississippi Kites have a suggestion of it, so here again we have morphological overlap.

3. *White tipping of secondaries.* I have yet to find an adult Plumbeous Kite with white-tipped secondaries, but I have examined enough Mississippi Kites to know that some adults have little or no white tipping, and that those individuals which have the character most strongly developed also have the most extensive concealed white markings on the wing coverts and scapulars; hence I regard the concealed white markings that are occasionally found on the back and wings of the Plumbeous Kite as further evidence of morphological overlap.

4. *Shape of tail.* The tail usually is truncate in the Plumbeous Kite, furcate in the Mississippi Kite. But at least four specimens in the American Museum's series of about fifty adult Plumbeous Kites have more or less furcate tails (the character is especially marked in a male, No. 121448, collected March 13, 1913, at Villavicencio, Colombia); and some Mississippi Kites have truncate tails (see Amer. Mus. Nat. Hist. No. 470055), so there is at least occasional morphological overlap in tail-shape.

5. *Proportions of wing and tail.* In the Plumbeous Kite the tail is less than half as long as the wing. I encountered no exception to this rule in a series of 42 specimens I measured and carefully checked at the American Museum. But in one specimen (a female, No. 73597) the

tail-length was 49.7 per cent that of the wing-length, and in five other specimens it was at least 48 per cent. In the Mississippi Kite, on the other hand, the tail is said to be more than half as long as the wing, but in the American Museum's series of 13 adults there are two in which the tail-length is only 49.5 per cent that of the wing-length, and there are four others in which it is very little more than 50 per cent (50.5, 50.9, 51.4, and 51.6 per cent). In other words there is actual morphological overlap here too.

6. *Color of fleshy parts.* Adult Plumbeous Kites are much brighter footed than adult Mississippi Kites in life, but there is enough yellow, orange, or orange-red on the tarsi, and sometimes the toes, of the latter to indicate that this brightness-of-foot character also is common to the two forms. The eyes are a beautiful deep red in both. The supraorbital shield and cere are without bright color in both, though the mouth-corners sometimes have a touch of red-orange.

7. *Immature plumage.* In the immature plumage we again find a difference in intensity, the Plumbeous Kite being more sharply black and white, especially below, and sometimes having an extensive red-brown wing-patch. From above, the two forms are scarcely distinguishable in this plumage; but the Mississippi Kite has much more concealed white on the scapulars and wing coverts—a fact that becomes instantly apparent with parting or lifting of the plumage. The Mississippi Kite is less heavily streaked, and therefore whiter, on the chin; more broadly streaked throughout the breast and belly; and the streaking is brown rather than dark gray. But in this plumage, as well as in the adult, there is no character strictly peculiar to one form or the other.

At no point does the breeding range of the Plumbeous Kite touch that of the Mississippi Kite though the latter is believed to have nested as far south as the mouth of the Rio Grande within recent times (May, 1935:17). I feel certain that the Plumbeous Kite nests nowhere more than a few miles north of Gomez Farias, Tamaulipas, where our party found it in the spring of 1941, and the southern limits of the Mississippi Kite's present-day breeding range (central Texas, southern Louisiana and extreme northwestern Florida) are far to the northward of this tropical valley. In winter there may be occasional overlapping, for some Mississippi Kites move southward into the range of the other bird (Peters, 1931:201).

How did the Mississippi Kite, this northward ranging relative of the Plumbeous Kite, become isolated? Did some storm of vast proportions carry its progenitors northward en masse, transferring them to a wooded country in which they established themselves in a single season? Or did these progenitors move slowly northward, only to become isolated because the dry country of northern Tamaulipas and southern Texas proved not to be adequate to their needs? Probably not. More plausible is the guess that before the ice-age the range of *Ictinia* was continuous from Florida westward along the Gulf Coast to Mexico;

that the southward moving ice sheet separated eastern birds from western; and that since the retreating of the ice the birds of the "Florida pocket" (that is, the Mississippi Kites of today) have been gradually moving westward and southward toward the western birds (that is, the Plumbeous Kites). The present day range of many reptiles and other animals suggests that some such explanation may well be the most accurate (see Mayr, 1942:177).

The Mississippi Kite now occupies a nesting range very distinct from that of the Plumbeous Kite. There is no area in which the two forms intergrade, no area in which one "approaches" the other. Only rarely do we come upon a specimen which might actually be called the former by one systematist, the latter by another. The Mississippi Kite is, in other words, a very distinct race or subspecies. But the similarities between it and its relative to the south are far more important than the dissimilarities—this is the point of my discussion. Giving the two birds the same species name will call attention to, and accent, the closeness of their relationship. Only through 'lumping' of this sort will scientific names serve to show the kinship of United States birds with those of lands far beyond our own borders.

If the above suggestion be adopted, our Mississippi Kite may well be thought of, if not actually called, the Mississippi Plumbeous Kite. How such a name would please Audubon, for Audubon, believing that his rival, Wilson, had merely re-described Gmelin's *Falco plumbeus*, relegated *Falco misisippiensis* to the synonymy of that species!

Another race of *Ictinia plumbea* has been described—*Ictinia plumbea vagans* Miller and Griscom (1921:5); but it seems to be generally conceded that Central American birds are not sufficiently different for recognition as a distinct race (see, for example, Dickey and van Rossem, 1938:107).

The races of *Ictinia plumbea* may, therefore, be listed as follows:

Ictinia plumbea plumbea (Gmelin)
Falco plumbeus Gmelin, Syst. Nat., 1, pt. 1, 1788, p. 283 (Cayenne, ex Latham)

Ictinia plumbea misisippiensis (Wilson)
Falco misisippiensis Wilson, Amer. Ornith., 3, 1811, p. 80, pl. 25, fig. 1 (below Natchez, Mississippi)

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